

Notice of Allowability**Application No.**

10/802,386

Applicant(s)

DIBBLE ET AL.

Examiner

VAN H. NGUYEN

Art Unit

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 08/14/2008 and the telephonic interview on 11/14/2008.
2. ☒ The allowed claim(s) is/are 1-6, 8, and 13-22 (now renumbered as 1-17).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 08/14/2008
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20081114.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

1. This communication is responsive to the amendment filed 08/14/2008 and the telephonic interview on 11/14/2008.

Please note that the examiner formerly in charge of examining this application, Kwok Lee, is no longer employed at the USPTO. Van H. Nguyen (Art Unit 2194) is now in charge of examining this application. Please update future correspondence accordingly.

Claims 1-6, 8, and 13-22 have been examined and allowed.

Information Disclosure Statement

2. The Applicants' Information Disclosure Statement, filed 08/14/2008, has been received, entered into the record, and considered.

3. **EXAMINER'S AMENDMENT:**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Giovanna H. Fessenden (Registration No. 60, 264) on 11/14/2008.

The application has been amended as follows:

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method, performed by a computer system, [[of]] for providing a dispatch table that reflects an execution context of computer readable instructions, the method comprising:

determining an execution context for computer readable instructions;

responding to a change in the execution context by using the dispatch table which reflects the change;

wherein the execution context for the instructions corresponds to the execution context of a thread executing in a data processing system, the thread being a real-time thread that is a schedulable object;

wherein if the thread is a real-time thread, the execution context of the thread is one of: a real-time thread with no scope on a scope stack; a real-time thread with at least

one scope on a scope stack; a no-heap real-time thread with no scope on a scope stack; or
a no-heap real-time thread with at least one scope on the stack;

wherein each execution context is associated with a corresponding dispatch table;

and

wherein determining a change in execution context includes:

determining that the execution context of the thread has changed; and

responding to the change by causing the thread to be associated with a

dispatch table reflecting the change.

2. (Currently Amended) [[A]] The method according to Claim 1 wherein the dispatch table includes one or more addresses, each address associated with a starting location for code associated with an instruction to be interpreted.

3. (Currently Amended) [[A]] The method according to Claim 2 wherein using a dispatch table which reflects the change in execution context further includes rewriting one or more entries of the dispatch table so that the rewritten locations point to code capable of handling the change in execution context.

4. (Currently Amended) [[A]] The method according to Claim 2 wherein using a dispatch table which reflects the change in execution context further includes selecting a predefined dispatch table having one or more addresses that point to code capable of

handing the change in execution context.

5. (Currently Amended) [[A]] The method according to Claim 4 wherein the predefined dispatch table is selected from a library of predefined dispatch tables, where each dispatch table in the library reflects a specific execution context.

6. (Currently Amended) [[A]] The method according to Claim 1 wherein determining a change in execution context further includes checking one or more memory references.

7. (Canceled).

8. (Currently Amended) [[A]] The method according to Claim 1 wherein the dispatch table reflecting the change in execution context is capable of managing one of the following execution states of the thread:

unreachable state;

state in which reference or assignment rules are not required;

state in which all assignment rules are enforced;

state in which only reference rules are enforced;

state in which reference and assignment rules, except those that refer to a depth of a scope stack, are enforced; or

state in which all reference and assignment rules are checked.

9-12. (Canceled).

13. (Currently Amended) [[A]] The method according to Claim 1 wherein determining the execution context further includes:

checking one or more memory references; or

checking one or more memory assignments.

14. (Currently Amended) [[A]] The method according to Claim 13 wherein the memory references and the memory assignments are allocated from at least one of the following: scope memory, heap memory or immortal memory.

15. (Currently Amended) [[A]] The method according to Claim 13 wherein checking memory references further includes detecting a change in execution context when there are at least two references to scoped memory areas on a scope stack.

16. (Currently Amended) [[A]] The method according to Claim 1 further includes storing a previous execution context of the thread as reflected in the dispatch table before the change.

17. (Currently Amended) [[A]] The method according to Claim 15 further includes in response to the thread returning to a previous execution context, causing the thread to be associated with the stored dispatch table.

18. (Currently Amended) [[A]] The method according to Claim 1 wherein using a dispatch table reflecting the change in execution context causes the instructions to be interpreted using memory reference checking rules or memory assignment checking rules.

19. (Currently Amended) [[A]] The method according to Claim 18 further including throwing an exception if there is a violation of any of the reference or assignment checking rules.

20. (Currently Amended) [[A]] The method according to Claim 1 wherein the dispatch table is used to implement the instructions into machine executable code.

21. (Currently Amended) [[A]] The method according to Claim 1 wherein a bytecode interpreter causes the dispatch table to reflect the change in execution context.

22. (Currently Amended) [[A]] The method according to Claim 1 wherein the dispatch table is any one of: a bytecode vector table or opcode vector table.

23-28. (Canceled).

4. **REASONS FOR ALLOWANCE:**

Claims 1-6, 8, and 13-22 are allowed.

The following is an examiner's statement of reasons for allowance:

Interpreting the claims in light of the specification, Examiner finds the claimed invention is patentably distinct from the prior art of record.

The prior art does not expressly teach or render obvious the invention as recited in independent claim 1.

Dependent claims are allowed as they depend upon allowable independent claims.

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM - 6:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MENG-AI AN can be reached at (571) 272-3756.

The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VAN H NGUYEN/
Primary Examiner, Art Unit 2194